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Panasonic PAN1026
Toshiba TC35661

Server Database
Command Interface Document

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PANASONIC Bluetooth Module PAN1026 CMD(SDB)

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Revision History

Date	Modification	Note
24th-June-2013	<p>1st Release</p> <p>Based on TC35661APL_ROM500_SDB_E_12thJune2013</p> <p>1.1 TCU_LE_GATT_SDB_ADD_PRIM_SVC_REQ Parameter length is changed to 0x0003 or 0x0011.</p> <p>1.3 TCU_LE_GATT_SDB_ADD_SEC_SVC_REQ Parameter length is changed to 0x0005 or 0x0013.</p> <p>1.5 TCU_LE_GATT_SDB_ADD_CHAR_DECL_REQ Parameter length is changed to 0x0006 or 0x0014.</p> <p>1.7 TCU_LE_GATT_SDB_ADD_CHAR_ELE_REQ Parameter length is changed to 0x000A or 0xFFFE.</p> <p>1.9 TCU_LE_GATT_SDB_ADD_INC_SVC_REQ Parameter length is changed to 0x0009 or 0x0017.</p> <p>Following commands are deleted.</p> <p>1.15 TCU_LE_GATT_SDB_REM_ATT_REQ</p> <p>1.16 TCU_LE_GATT_SDB_REM_ATT_RESP</p>	
26th-July-2013	<p>Following addition</p> <p>1.17 TCU_LE_GATT_SDB_SET_ATTR_PERMS_REQ</p> <p>1.18 TCU_LE_GATT_SDB_SET_ATTR_PERMS_RESP</p> <p>1.19 TCU_LE_GATT_SDB_GET_ATTR_PERMS_REQ</p> <p>1.20 TCU_LE_GATT_SDB_GET_ATTR_PERMS_RESP</p> <p>1.21 TCU_LE_GATT_SDB_GET_ATTR_TYPE_VALUE_REQ</p> <p>1.22 TCU_LE_GATT_SDB_GET_ATTR_TYPE_VALUE_RESP</p>	

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1 Server Database Commands

For All GATT TCU Commands Data input (Parameter Length, Start Handle etc) must be in Little Endian Format. Also the data output through Response and Event will be in Little Endian Format.

1.1 TCU_LE_GATT_SDB_ADD_PRIM_SVC_REQ

This command is used to add primary service attributes to the server database. The Attribute type will be set as 0x2800 since the request is for adding primary service. The Attribute value to be added will be contained in the command. When this command processing is completed “TCU_LE_GATT_SDB_ADD_PRIM_SVC_RESP” is obtained. This response will contain the handle generated for this primary service by the server database.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Attribute Value Length	1Byte
Attribute Value	2Bytes or 16Bytes

ServiceID 0xD3
OpCode 0x20
Parameter Length 0x0003 or 0x0011

Parameters:

Parameters	Parameter Description	Value
Attribute Value Length	This parameter will give the length of the attribute value of the primary service to be added to the server database	0x02 or 0x10
Attribute Value	This parameter will contain the attribute value of the primary service to be added. This attribute value is a UUID which can either be 2 bytes or 16 bytes	-

(Note)

It is assumed that the attribute type UUID for the primary service is 0x2800 according to the Bluetooth specification Core_V4.0.pdf.

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1.2 TCU_LE_GATT_SDB_ADD_PRIM_SVC_RESP

This command is used to return the handle of the primary service added to the server database. The primary service handle returned must be maintained by the server application. **This handle must be used mandatorily as a reference to add any Characteristic Declaration or Secondary Services or Include Services under this primary service.**

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
Primary Service Handle	2Bytes

ServiceID 0xD3
OpCode 0xA0
Parameter Length 0x0001 or 0x0003

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the add primary service request	Refer Error Response Table of Server Database for details.
Primary Service Handle	This is the handle of the primary service added to the server database.	-

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1.3 TCU_LE_GATT_SDB_ADD_SEC_SVC_REQ

This command is used to add secondary service declaration to the server database. The secondary service will be added under primary service or secondary service (for nested secondary services) for which handle is specified as the input in the command format. This command will add secondary service declaration in server database with Attribute Type as 0x2801. Attribute Value is contained in the command format. Handle Value decided by the server database will be the returned in the response “TCU_LE_GATT_SDB_ADD_SEC_SVC_RESP”.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Handle	2Bytes
Attribute Value Length	1Byte
Attribute Value	2Bytes or 16Bytes

ServiceID: 0xD3

OpCode: 0x21

Parameter Length: 0x0005 or 0x0013

Parameters:

Parameters	Parameter Description	Value
Handle	This parameter will give the handle of the service under which the secondary service will be added. This handle will correspond to a primary service or secondary service.	-
Attribute Value Length	This parameter will give the length of the attribute value of the secondary service to be added to the server database	0x02 or 0x10
Attribute Value	This parameter will contain the attribute value of the secondary service to be added. This attribute value is a UUID which can either be 2 bytes or 16 bytes	-

Note:

1. It is assumed that the attribute type for the secondary service is 0x2801 according to the Bluetooth specification Core_V4.0.pdf.
2. If a particular secondary service contains nested secondary services then they must be added before adding any other secondary service under that primary service. This is mandatory and needed so that server database can allocate handles in a sequential manner for all secondary services under the same group.

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1.4 TCU_LE_GATT_SDB_ADD_SEC_SVC_RESP

This command is used to return the handle of the secondary service added to the server database using the command "TCU_LE_GATT_SDB_ADD_SEC_SVC_REQ". The secondary service handle returned must be maintained by the server application. This handle must be used mandatorily as a reference to add any Characteristic Declaration or Secondary Services Declaration or Include Services Declaration under this secondary service.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
Secondary Service Handle	2Bytes

ServiceID 0xD3
OpCode 0xA1
Parameter Length 0x0001 or 0x0003

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the add secondary service request	Refer Error Response Table of Server Database for details.
Secondary Service Handle	This is the handle of the secondary service added to the server database.	-

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1.5 TCU_LE_GATT_SDB_ADD_CHAR_DECL_REQ

This command is used to add characteristic declaration for a particular primary or secondary service. The service handle for which characteristics needs to be declared is contained in the command format. When this command processing is completed "TCU_LE_GATT_SDB_ADD_CHAR_DECL_RESP" is obtained. This response will contain the handle generated for this characteristic by the server database.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Handle	2Bytes
Characteristic Properties	1Byte
UUID Length	1Byte
UUID Value	2Bytes or 16Bytes

ServiceID 0xD3
OpCode 0x22
Parameter Length 0x0006 or 0x0014

Parameters:

Parameters	Parameter Description	Value
Handle	This parameter is the handle of the primary service or secondary service under which the characteristic needs to be declared.	-
Characteristic Properties	This parameter will indicate the property of the characteristic added to the server database. The Characteristic Properties bit field determines how the Characteristic Value can be used, or how the characteristic descriptors can be accessed. If the bits defined are set, the action described is permitted. Multiple Characteristic Properties can be set.	The values permitted are listed in the table below.
UUID Length	This parameter will give the length of the UUID value of the characteristic declaration to be added to the server database	0x02 or 0x10
UUID Value	This parameter will contain the UUID value of the characteristic declaration to be added. This is a UUID which can either be 2 bytes or 16 bytes	-

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CHARACTERISTIC PROPERTIES	VALUE	DESCRIPTION
Broadcast	0x01	Permits broadcasts of the Characteristic Value using Characteristic Configuration Descriptor
Read	0x02	Permits reads of the Characteristic Value
Write Without Response	0x04	Permit writes of the Characteristic Value without response
Write	0x08	Permits writes of the Characteristic Value with response
Notify	0x10	Permits notifications of a Characteristic Value without acknowledgement
Indicate	0x20	Permits indications of a Characteristic Value with acknowledgement
Authenticated Signed Writes	0x40	Permits signed writes to the Characteristic Value
Extended Properties	0x80	Additional characteristic properties are defined in the Characteristic Extended Properties Descriptor

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1.6 TCU_LE_GATT_SDB_ADD_CHAR_DECL_RESP

This command is used to return the handle of the characteristic declaration added to the server database using the command “**TCU_LE_GATT_SDB_ADD_CHAR_DECL_REQ**”. This handle must be used as reference mandatorily to add or declare elements like the Characteristic Value Declaration, Characteristic Descriptor Declaration etc for the Characteristic Declared.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
Characteristic Declaration Handle	2Bytes

ServiceID 0xD3
OpCode 0xA2
Parameter Length 0x0001 or 0x0003

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the add characteristic declaration request	Refer Error Response Table of Server Database for details.
Characteristic Declaration Handle	This is the handle of the characteristic declaration added to the server database.	-

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1.7 TCU_LE_GATT_SDB_ADD_CHAR_ELE_REQ

This command is used to add elements like Characteristic Value Declaration, Characteristic Descriptor Declaration etc for the Characteristic declared. Handle of the characteristic for which elements need to be declared is contained in the command format. When this command processing is completed “**TCU_LE_GATT_SDB_ADD_CHAR_ELE_RESP**” is obtained. This response will contain the handle generated for this characteristic element by the server database.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Characteristic Handle	2Bytes
Attribute Type Length	1Byte
Attribute Type	2Bytes or 16Bytes
Attribute Value Length	2Bytes
Attribute Value	1Byte – 65511 Bytes (MAX)
Attribute Permission	2Bytes

ServiceID 0xD3
OpCode 0x23
Parameter Length 0x000A - 0xFFFFE

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Parameters:

Parameters	Parameter Description	Value
Characteristic Handle	This parameter is the handle of the characteristic for which attribute needs to be declared.	-
Attribute Type Length	This parameter will give the length of the attribute type of the characteristic element to be added to the server database.	0x02 or 0x10
Attribute Type	This parameter will give the length of the Attribute Type of the characteristic element to be added to the server database. This attribute type is a UUID which is either 2bytes or 16bytes.	-
Attribute Value Length	This parameter will contain the length of the Attribute value of the characteristic element to be added.	0x01-0xFFE7
Attribute Value	This parameter will give the attribute value of the characteristic element to be added.	-
Attribute Permission	This parameter will give the permissions of the characteristic element added to the server database.	-

(Note)

Attribute permissions Bit Allocation is as follows:

Bits [0][1] - Read/Write
Bit [2] - Authorization
Bit[3] - Authentication
Bit[4] - Encryption
Bits[5-7] - Reserved
Bits[8-12] - Encryption Key Size
Bits[13-15] - Reserved

The Bits definition for the permission is as follows:

Bits[1-0]:

00 - No read/write permission
01 - Readable
01 - Writable
11 - Both readable and writable

Bit[2]:

0 - No Authorization
1 - Authorization Needed

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Bits[3]:

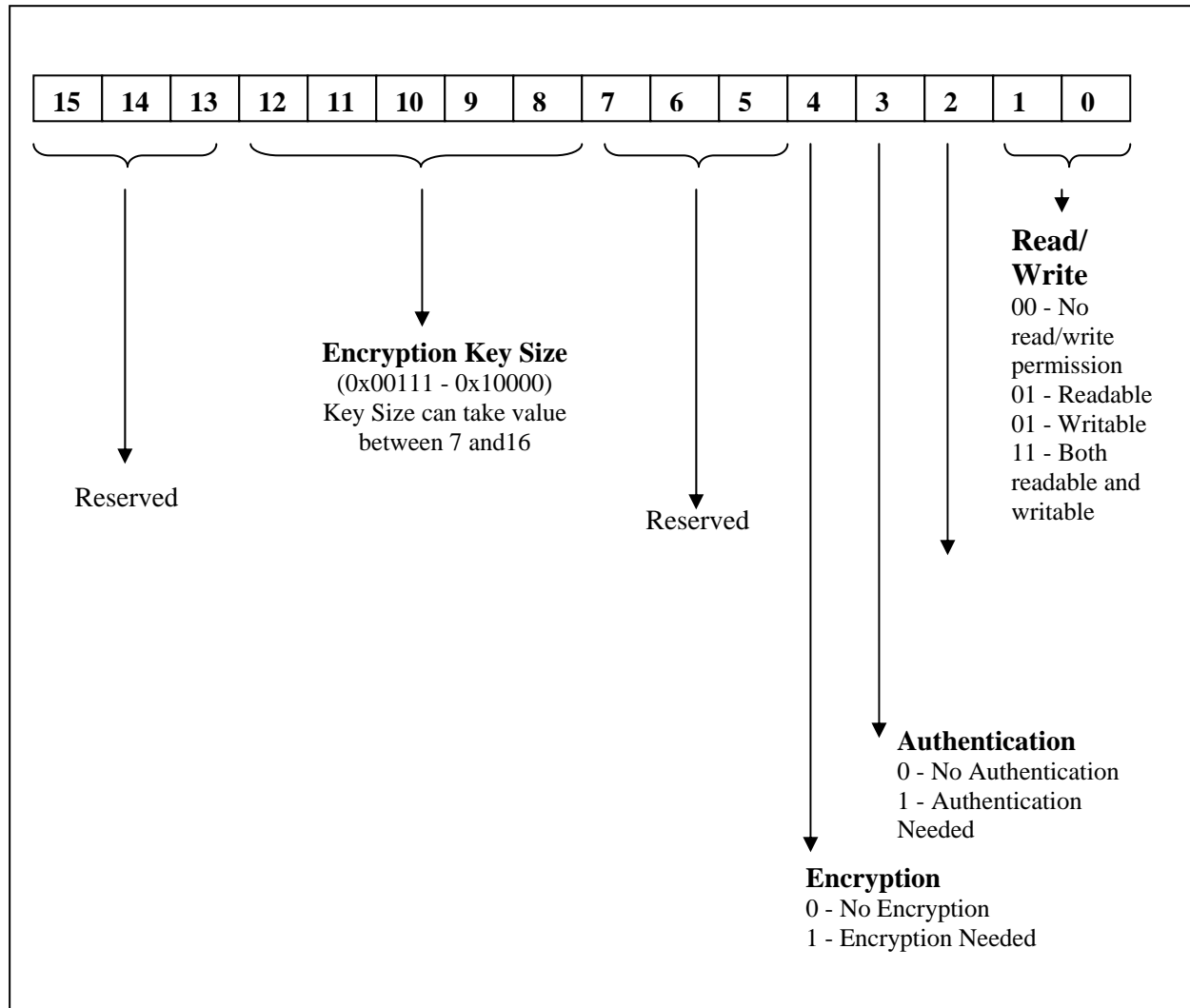
- 0 - No Authentication
- 1 - Authentication Needed

Bits[4]:

- 0 - No Encryption
- 1 - Encryption Needed

Bits[8-12]:0x00111 - 0x10000

Encryption Key Size can take any value between 7-16



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1.8 TCU_LE_GATT_SDB_ADD_CHAR_ELE_RESP

This command is used to return the handle of the characteristic element added to the server database using the command “TCU_LE_GATT_SDB_ADD_CHAR_ELE_REQ”.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
Characteristic Element Handle	2Bytes

ServiceID 0xD3
OpCode 0xA3
Parameter Length 0x0001 or 0x0003

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the add characteristic element request	Refer Error Response Table of Server Database for details.
Characteristic Element Handle	This is the handle of the characteristic element added to the server database.	-

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1.9 TCU_LE_GATT_SDB_ADD_INC_SVC_REQ

This command is used to Add Include Service within the primary service or secondary service. When this command processing is completed "TCU_LE_GATT_SDB_ADD_INC_SVC_RESP" is obtained. This response will contain the handle generated for included service by the server database.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Service Handle	2Bytes
Attribute Value Length	1Byte
Attribute Value	6Bytes or 20Bytes

ServiceID 0xD3
OpCode 0x24
Parameter Length 0x0009 or 0x0017

Parameters:

Parameters	Parameter Description	Value
Service Handle	This parameter is the handle of the primary or secondary service under which the include service is to be added.	-
Attribute Value Length	This parameter will give the length of the attribute value of the include service to be added to the server database.	0x02 or 0x10
Attribute Value	This parameter is the attribute value of the include service to be added to the server database. This value contains Include Service Start Handle, Include Service End Handle and Include Service UUID. This UUID can be either a 2byte or 16byte value.	-

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1.10 TCU_LE_GATT_SDB_ADD_INC_SVC_RESP

This command is used to return the handle of the characteristic element added to the server database using the command “TCU_LE_GATT_SDB_ADD_INC_SVC_REQ”.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
Include Service Handle	2Bytes

ServiceID 0xD3
OpCode 0xA4
Parameter Length 0x0001 or 0x0003

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the add include service request	Refer Error Response Table of Server Database for details.
Include Service Handle	This is the handle of the include service added to the server database.	-

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1.11 TCU_LE_GATT_SDB_UPD_CHAR_ELE_REQ

This command is used to update or change the attribute value for Characteristic Value Declaration, Characteristic Descriptor Declaration etc for the Characteristic Elements. Using the handle the server database will identify the attribute element (like Characteristic Value, Characteristic Format, and Characteristic User Descriptor etc) whose value need to be changed/Updated. When this command processing is completed “TCU_LE_GATT_SDB_UPD_CHAR_ELE_RESP” is obtained.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Characteristic Element Handle	2Bytes
Attribute Value Length	2Bytes
Attribute Value	1Byte – 65511 Bytes (MAX)

ServiceID 0xD3
OpCode 0x25
Parameter Length 0x0005 - 0xFFFF

Parameters:

Parameters	Parameter Description	Value
Service Handle	This parameter is the handle of the characteristic element to be updated.	-
Attribute Value Length	This parameter will give the length of the characteristic element to be updated.	0x01-0xFFE7
Attribute Value	This parameter is the attribute value to be updated in the server database.	-

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1.12 TCU_LE_GATT_SDB_UPD_CHAR_ELE_RESP

This command gives the status of the update characteristic element request done using the command "TCU_LE_GATT_SDB_UPD_CHAR_ELE_REQ"

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte

ServiceID 0xD3
OpCode 0xA5
Parameter Length 0x0001

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the update characteristic element request	Refer Error Response Table of Server Database for details.

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1.13 TCU_LE_GATT_SDB_RET_END_GRP_HLE_REQ

This command is used to obtain the end group handle for a specified Service. The service for which end group handle is desired is specified as a part of the command. The Handle specified in the command can be the handle of any primary or secondary service (even nested secondary service) which is already declared in the server database. When this command processing is completed “TCU_LE_GATT_SDB_RET_END_GRP_HLE_RESP” is obtained.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Service Handle	2Bytes

ServiceID 0xD3
OpCode 0x26
Parameter Length 0x0002

Parameters:

Parameters	Parameter Description	Value
Service Handle	This parameter is the handle of the service for which the end handle is needed to be found.	-

(Note)

This End Group Handle is used when Include Service needs to be added for a particular service. One of the values to be input for the included service is End Group handle for the service being included.

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1.14 TCU_LE_GATT_SDB_RET_END_GRP_HLE_RESP

This command gives the end handle of the service for which the “TCU_LE_GATT_SDB_RET_END_GRP_HLE_REQ” request was sent.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
End Group Handle	2Bytes

ServiceID 0xD3
OpCode 0xA6
Parameter Length 0x0001 or 0x0003

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the update characteristic element request	Refer Error Response Table of Server Database for details.
End Group Handle	This parameter gives the end group handle of the requested service.	-

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1.15 TCU_LE_GATT_RESET_CONF_DESC_REQ

This command is used to reset the client characteristic configuration descriptors for all the services added in the server DB. When this command processing is completed “TCU_LE_GATT_RESET_CONF_DESC_REQ_RESP” is obtained.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Attribute Handle	2Bytes

ServiceID 0xD3
OpCode 0x28
Parameter Length 0x0002

Parameters:

Parameters	Parameter Description	Value
Attribute Handle	This parameter is the handle of the attribute that has to be removed from the server database.	-

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1.16 TCU_LE_GATT_RESET_CONF_DESC_RESP

This command gives the status after resetting the client characteristics configuration descriptor for all the services in server DB using “TCU_LE_GATT_RESET_CONF_DESC_REQ” command.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte

ServiceID 0xD3
OpCode 0xA8
Parameter Length 0x0001

Parameters:

Parameters	Parameter Description	Value
Status	This parameter indicates the status of the remove attribute request	Refer Error Response Table of Server Database for details.

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1.17 TCU_LE_GATT_SDB_SET_ATTR_PERMS_REQ

This request is used to set/change the permission of a characteristic element. The format of 'Attribute Permission' in this request is the same as that of Attribute Permissions in the request 'TCU_LE_GATT_SDB_ADD_CHAR_ELE_REQ' as indicated in the SDS.

When the attribute handle is that of a characteristic descriptor or characteristic value, the attribute permission in the request will be updated to the attribute permission of that characteristic descriptor or characteristic value. Additionally, when the attribute handle is that of a characteristic value, the read and write permissions present in the attribute permission of the request will be updated to the characteristic properties flag of the corresponding characteristic declaration. The other fields (e.g., Broadcast, Notification etc.) of the property flag will not be affected during this request.

The firmware will send 'TCU_LE_GATT_SDB_SET_ATTR_PERMS_RESP' response to this request. This response will indicate whether the permission set by the host has been successfully updated in database.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Attribute Handle	2Bytes
Attribute Permission	2Bytes

ServiceID: 0xD3

OpCode: 0x29

Parameter Length: 0x0004

Parameters:

Parameters	Parameter Description	Value
Attribute Handle	This parameter will contain the attribute handle of the characteristic element whose permission needs to be set	0x0001-0xFFFF
Attribute Permission	This parameter will contain the permission to be set for the attribute handle	-

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1.18 TCU_LE_GATT_SDB_SET_ATTR_PERMS_RESP

This response is sent in reply to 'TCU_LE_GATT_SDB_SET_ATTR_PERMS_REQ' sent by the host. This event will contain the status which will indicate whether the permission set by the host has been successfully updated in the database.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte

ServiceID: 0xD3

OpCode: 0xA9

Parameter Length: 0x0001

Parameters:

Parameters	Parameter Description	Value
Status	This parameter will indicate the status for the request.	0x00 – Success 0x01 – Invalid Handle 0x03 – GATT Not Initialized 0x80 – Invalid Packet

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1.19 TCU_LE_GATT_SDB_GET_ATTR_PERMS_REQ

This request is used to get/obtain the permission for the characteristic element (characteristic value and characteristic descriptors). The firmware will send 'TCU_LE_GATT_SDB_GET_ATTR_PERMS_RESP' in response to this request. This response will contain the permission field requested by the host.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Attribute Handle	2Bytes

ServiceID: 0xD3

OpCode: 0x2A

Parameter Length: 0x0002

Parameters:

Parameters	Parameter Description	Value
Attribute Handle	This parameter will contain the attribute handle of the characteristic element whose permission needs to be obtained	0x0001-0xFFFF

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1.20 TCU_LE_GATT_SDB_GET_ATTR_PERMS_RESP

This response is sent in reply to 'TCU_LE_GATT_SDB_GET_ATTR_PERMS_REQ' sent by the host. This event will contain the attribute permission for the handle requested by the host. The format of 'Attribute Permission' in the response is the same as that of Attribute Permissions in the request 'TCU_LE_GATT_SDB_ADD_CHAR_ELE_REQ' as indicated in the SDS.

During this request for characteristic value, the firmware will copy the read and write permission from the Characteristic Properties flag of the characteristic declaration and update it in the read and write bit positions of the attribute permission that will be sent to the host. The other bit fields (like authentication, encryption, and encryption key size) will be updated from the permission field of the characteristic element itself.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
Attribute Permission	2Bytes

ServiceID: 0xD3

OpCode: 0xAA

Parameter Length: 0x0003

Parameters:

Parameters	Parameter Description	Value
Status	This parameter will indicate the status for the request.	0x00 – Success 0x01 – Invalid Handle 0x03 – GATT Not Initialized 0x80 – Invalid Packet
Attribute Permission	This parameter will contain the attribute permission requested if the status is SUCCESS	-

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1.21 TCU_LE_GATT_SDB_GET_ATTR_TYPE_VALUE_REQ

This request will be used by the host to obtain/get the attribute type and attribute value corresponding to the handle given in the request. The firmware will send '**TCU_LE_GATT_SDB_GET_ATTR_TYPE_VALUE_RESP**' in response to this request. For a valid request, this response will contain the attribute value and attribute type corresponding to the given handle.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Attribute Handle	2Bytes

ServiceID: 0xD3

OpCode: 0x2B

Parameter Length: 0x0002

Parameters:

Parameters	Parameter Description	Value
Attribute Handle	This parameter will contain the attribute handle whose attribute type and attribute value needs to be obtained	0x0001-0xFFFF

PANASONIC Bluetooth Module PAN1026_CMD(SDB)

1.22 TCU_LE_GATT_SDB_GET_ATTR_TYPE_VALUE_RESP

This response is sent in reply to 'TCU_LE_GATT_SDB_GET_ATTR_TYPE_VALUE_REQ' sent by the host. This event will contain attribute type and attribute value corresponding to the handle given in the request.

Command Format:

ServiceID	1 Byte
OpCode	1 Byte
Parameter Length	2Bytes
Status	1Byte
Attribute Type Length	1Byte
Attribute Type	2Bytes or 16Bytes
Attribute Value Length	2Bytes
Attribute Value	1Byte to (MAX_BUFFER_SIZE-6)

ServiceID: 0xD3

OpCode: 0xAB

Parameter Length: 0x0001- MAX_BUFFER_SIZE

Parameters:

Parameters	Parameter Description	Value
Status	This parameter will indicate the status of the request	0x00 – Success 0x01 – Invalid Handle 0x03 – GATT Not Initialized 0x80 – Invalid Packet
Attribute Type Length	This parameter will indicate the length of the attribute type corresponding to the input handle	0x02 or 0x10
Attribute Type	This parameter will contain the attribute type corresponding to the input handle	-
Attribute Value Length	This parameter will indicate the length of the attribute value corresponding to the input handle	0x0001- MAX_BUFFER_SIZE
Attribute Value	This parameter will contain the attribute value corresponding to the input handle	-

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2 Maximum response time

2.1 Response time from command to response

Command(TCU_LE_GATT_***)	msec
TCU_LE_GATT_SDB_ADD_PRIM_SVC_REQ	TBD
TCU_LE_GATT_SDB_ADD_SEC_SVC_REQ	TBD
TCU_LE_GATT_SDB_ADD_CHAR_DECL_REQ	TBD
TCU_LE_GATT_SDB_ADD_CHAR_ELE_REQ	TBD
TCU_LE_GATT_SDB_ADD_INC_SVC_REQ	TBD
TCU_LE_GATT_SDB_UPD_CHAR_ELE_REQ	TBD
TCU_LE_GATT_SDB_RET_END_GRP_HLE_REQ	TBD
TCU_LE_GATT_SDB_REM_ATT_REQ	TBD

2.2 Recommendation for HOST CPU

When TC35661 does not notify event within above time, TC35661 is under unusual operation.

Then HOST CPU should reset TC35661 with HW-RESET. It is recommended for HOST to consider extra time from above time.

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3 Status Code List

The below table lists the various possible error values that can occur during the addition of attributes to the server database.

ERROR VALUE	DESCRIPTION
0	Success
1	Memory Not Available
2	Invalid Handle
3	Maximum Characteristics Handle is exceeded.
4	Invalid Packet

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4 Appendix

Acronyms and Definitions

Listed below are the acronyms used in this document:

SL. No	ACRONYM	DEFINITION
1	ATT	Attribute
2	CHAR	Characteristic
3	DECL	Declaration
4	DESP	Descriptor
5	DISC	Discover
6	ELE	Element
7	GATT	Generic Attribute Profile
8	GRP	Group
9	HLE	Handle
10	INC	Include
11	LE	Low Energy
12	PRIM	Primary
13	REM	Remove
14	REQ	Request
15	RES	Response
16	RET	Return
17	SDB	Server Database
18	SEC	Secondary
19	SVC	Service
20	UPD	Update
21	VAL	Value

End of document.