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Zone Control API

4

가 , . 가 (,)

- | | | | |
|---------------------------------------|---|---|---|
| • BS2_GetAntiPassbackZone: | 가 | . | |
| • BS2_GetAllAntiPassbackZone: | 가 | . | |
| • BS2_GetAntiPassbackZoneStatus: | | | 가 |
| • BS2_GetAllAntiPassbackZoneStatus: | | | 가 |
| • BS2_SetAntiPassbackZone: | . | | |
| • BS2_SetAntiPassbackZoneAlarm: | | | . |
| • BS2_RemoveAntiPassbackZone: | | . | |
| • BS2_RemoveAllAntiPassbackZone: | | . | |
| • BS2_ClearAntiPassbackZoneStatus: | | | |
| • BS2_ClearAllAntiPassbackZoneStatus: | . | | |

가 $\frac{1}{2}$ 가 $\left(\frac{1}{2}, \frac{1}{2} \right)$.

- BS2_GetTimedAntiPassbackZone: 가 .
- BS2_GetAllTimedAntiPassbackZone: 가 .
- BS2_GetTimedAntiPassbackZoneStatus: 가 .
- BS2_GetAllTimedAntiPassbackZoneStatus: 가 .
- BS2_SetTimedAntiPassbackZone: .
- BS2_SetTimedAntiPassbackZoneAlarm: .
- BS2_RemoveTimedAntiPassbackZone: .
- BS2_RemoveAllTimedAntiPassbackZone: .
- BS2_ClearTimedAntiPassbackZoneStatus: .
- BS2_ClearAllTimedAntiPassbackZoneStatus: .

가 BioStar	BioStar				
• BS2_GetFireAlarmZone:	가	.			
• BS2_GetAllFireAlarmZone:	가	.			
• BS2_GetFireAlarmZoneStatus:			가	.	
• BS2_GetAllFireAlarmZoneStatus:			가	.	
• BS2_SetFireAlarmZone:	.				
• BS2_SetFireAlarmZoneAlarm:			.		
• BS2_RemoveFireAlarmZone:		.			
• BS2_RemoveAllFireAlarmZone:		.			

/					
	/				
• BS2_GetScheduledLockUnlockZone:	/	가	.		
• BS2_GetAllScheduledLockUnlockZone:	/	가	.		
• BS2_GetScheduledLockUnlockZoneStatus:		/		가	
• BS2_GetAllScheduledLockUnlockZoneStatus:		/		가	
• BS2_SetScheduledLockUnlockZone:	/		.		
• BS2_SetScheduledLockUnlockZoneAlarm:	/		.		
• BS2_RemoveScheduledLockUnlockZone:		/	.		
• BS2_RemoveAllScheduledLockUnlockZone:		/	.		

가 BioStar	가 BioStar				
• BS2_GetIntrusionAlarmZone:	가	.			
• BS2_GetIntrusionAlarmZoneStatus:			가	.	
• BS2_GetAllIntrusionAlarmZoneStatus:			가	.	
• BS2_SetIntrusionAlarmZone:	.				
• BS2_SetIntrusionAlarmZoneAlarm:			.		
• BS2_RemoveIntrusionAlarmZone:		.			
• BS2_RemoveAllIntrusionAlarmZone:		.			
• BS2_SetIntrusionAlarmZoneArm:	/		.		

- [BS2_GetInterlockZone:](#)가 .
- [BS2_GetInterlockZoneStatus:](#)가 .
- [BS2_GetAllInterlockZoneStatus:](#)가 .
- [BS2_SetInterlockZone:](#) .
- [BS2_SetInterlockZoneAlarm:](#) .
- [BS2_RemoveInterlockZone:](#) .
- [BS2_RemoveAllInterlockZone:](#) .

Ethernet

Zone Master

BioStar V2.x

가

Zone

가

(Master ↔ Member)

Ethernet TCP

1.x Entrance Limit, Fire Alarm Zone

- [BS2_GetDeviceZone:](#) Ethernet 가 .
- [BS2_GetAllDeviceZone:](#) Ethernet 가 .
- [BS2_SetDeviceZone:](#) Ethernet .
- [BS2_RemoveDeviceZone:](#) Ethernet .
- [BS2_RemoveAllDeviceZone:](#) Ethernet .
- [BS2_SetDeviceZoneAlarm:](#) Ethernet .
- [BS2_ClearDeviceZoneAccessRecord:](#) Ethernet
- [BS2_ClearAllDeviceZoneAccessRecord:](#) Ethernet
- [BS2_GetAccessGroupEntranceLimit:](#)가 .
- [BS2_GetAllAccessGroupEntranceLimit:](#)가 .
- [BS2_SetAccessGroupEntranceLimit:](#) .
- [BS2_RemoveAccessGroupEntranceLimit:](#) .
- [BS2_RemoveAllAccessGroupEntranceLimit:](#) .
- [BS2_GetDeviceZoneAGEntranceLimit:](#) Ethernet Access Group 가
- [BS2_GetAllDeviceZoneAGEntranceLimit:](#) Ethernet Access Group 가
- [BS2_SetDeviceZoneAGEntranceLimit:](#) Ethernet Access Group .
- [BS2_RemoveDeviceZoneAGEntranceLimit:](#) Ethernet Access Group
- [BS2_RemoveAllDeviceZoneAGEntranceLimit:](#) Ethernet Access Group

BS2ZoneStatus

```
typedef struct {
    uint32_t id;
    uint8_t status;
    uint8_t disabled;
    uint8_t reserved[6];
} BS2ZoneStatus;
```

1. *id*

2. *status*

0	
1	
2	scheduled lock
4	scheduled unlock

3. *disabled*

flag

4. *reserved*

BS2ApbMember

```
typedef struct {
    uint32_t deviceID;
    uint8_t type;
    uint8_t reserved[3];
} BS2ApbMember;
```

1. *deviceID*

2. *type*

APB reader

-1	

0	
1	

3. *reserved*

BS2TimedApbMember

```
typedef struct {
    uint32_t deviceID;
    uint8_t reserved[4];
} BS2TimedApbMember;
```

1. *deviceID*

2. *reserved*

BS2FireSensor

```
typedef struct {
    uint32_t deviceID;
    uint8_t port;
    uint8_t switchType;
    uint8_t duration;
} BS2FireSensor ;
```

1. *deviceID*

2. *port*

3. *switchType*

0	
1	

4. *duration*

millisecond

BS2AntiPassbackZone

```
typedef struct {
```

```
uint32_t zoneID;
char name[BS2_MAX_ZONE_NAME_LEN];
uint8_t type;
uint8_t numReaders;
uint8_t numBypassGroups;
uint8_t disabled;
uint8_t alarmed;
uint8_t reserved[3];
uint32_t resetDuration;
BS2Action alarm[BS2_MAX_APB_ALARM_ACTION];
BS2ApbMember readers[BS2_MAX_READERS_PER_APB_ZONE];
uint8_t reserved2[512];
uint32_t bypassGroupIDs[BS2_MAX_BYPASS_GROUPS_PER_APB_ZONE];
} BS2AntiPassbackZone;
```

1. *zoneID*

1 가 .

가 .

2. *name*

BioStar .

3. *type*

0	Hard APB(가)
1	Soft APB()

4. *numReaders*

APB reader .

5. *numBypassGroups*

APB .

6. *disabled*

flag .

7. *alarmed*

8. *reserved*

9. *resetDuration*

가 APB		
0		BioStar
10. alarm		
가 APB	5	
11. readers		
	64	
12. reserved2		
13. bypassGroupIDs		
APB	16	

BS2TimedAntiPassbackZone

```
typedef struct {
    uint32_t zoneID;
    char name[BS2_MAX_ZONE_NAME_LEN];
    uint8_t type;
    uint8_t numReaders;
    uint8_t numBypassGroups;
    uint8_t disabled;
    uint8_t alarmed;
    uint8_t reserved[3];
    uint32_t resetDuration;
    BS2Action alarm[BS2_MAX_TIMED_APB_ALARM_ACTION];
    BS2TimedApbMember readers[BS2_MAX_READERS_PER_TIMED_APB_ZONE];
    uint8_t reserved2[320];
    uint32_t bypassGroupIDs[BS2_MAX_BYPASS_GROUPS_PER_TIMED_APB_ZONE];
} BS2TimedAntiPassbackZone;
```

1. zoneID
- 1가
2. name
- BioStar
3. type

0	Hard APB(가)
1	Soft APB()

4. numReaders

	reader	.
5. numBypassGroups		.
6. disabled	flag	.
7. alarmed		.
8. reserved		.
9. resetDuration	가	
	, 0	, BioStar
10. alarm	가	5
11. readers		64
12. reserved2		
13. bypassGroupIDs		16

BS2FireAlarmZone

```
typedef struct {
    uint32_t zoneID;
    char name[BS2_MAX_ZONE_NAME_LEN];
    uint8_t numSensors;
    uint8_t numDoors;
    uint8_t disabled;
    uint8_t alarmed;
    uint8_t reserved[8];
    BS2FireSensor sensor[BS2_MAX_FIRE_SENSORS_PER_FIRE_ALARM_ZONE];
    BS2Action alarm[BS2_MAX_FIRE_ALARM_ACTION];
    uint8_t reserved2[32];
    uint32_t doorIDs[BS2_MAX_DOORS_PER_FIRE_ALARM_ZONE];
} BS2FireAlarmZone;
```

1. zoneID
- 1가.
2. name

BioStar

3. *numSensors*

4. *numDoors*

5. *alarmed*

6. *disabled*

flag

7. *reserved*

8. *sensor*

8

9. *alarm*

5

10. *reserved2*

11. *doorIDs*

32

BS2ScheduledLockUnlockZone

```
typedef struct {
    uint32_t zoneID;
    char name[BS2_MAX_ZONE_NAME_LEN];
    uint32_t lockScheduleID;
    uint32_t unlockScheduleID;
    uint8_t numDoors;
    uint8_t numBypassGroups;
    uint8_t numUnlockGroups;
    uint8_t bidirectionalLock;
    uint8_t disabled;
    uint8_t alarmed;
    uint8_t reserved[6];
    BS2Action alarm[BS2_MAX_SCHEDULED_LOCK_UNLOCK_ALARM_ACTION];
    uint8_t reserved2[32];
    uint32_t doorIDs[BS2_MAX_DOORS_IN_SCHEDULED_LOCK_UNLOCK_ZONE];
    uint32_t
bypassGroupIDs[BS2_MAX_BYPASS_GROUPS_IN_SCHEDULED_LOCK_UNLOCK_ZONE];
    uint32_t
unlockGroupIDs[BS2_MAX_UNLOCK_GROUPS_IN_SCHEDULED_LOCK_UNLOCK_ZONE];
} BS2ScheduledLockUnlockZone;
```

1. zoneID	1	가	.
2. name			.
BioStar			.
3. lockScheduleID			.
4. unlockScheduleID			.
5. numDoors			.
6. numBypassGroups			.
7. numUnlockGroups		가	.
8. bidirectionalLock			.
9. disabled	flag	.	.
10. alarmed			.
11. reserved			.
12. alarm		5	.
13. reserved2			.
14. doorIDs		32	.
15. bypassGroupIDs			16
16. unlockGroupIDs		가	.
16			.

BS2IntrusionAlarmZone

```
typedef struct {
```

```
uint32_t zoneID;  
char name[BS2_MAX_ZONE_NAME_LEN];  
uint8_t armDelay;  
uint8_t alarmDelay;  
uint8_t disabled;  
uint8_t reserved[1];  
uint8_t numReaders;  
uint8_t numInputs;  
uint8_t numOutputs;  
uint8_t numCards;  
uint8_t numDoors;  
uint8_t numGroups;  
uint8_t reserved2[10];  
} BS2IntrusionAlarmZone;
```

1. *zoneID*

1 가 .

2. *name*

BioStar .

3. *armDelay*

.

4. *alarmDelay*

.

5. *disabled*

flag .

6. *reserved[1]*

.

7. *numReaders*

.

8. *numInputs*

.

9. *numOutputs*

.

10. *numCards*

.

11. *numDoors*

.

12. *numGroups*

.

13. *reserved*

.

BS2IntrusionAlarmZoneBlob

```
typedef struct {
    BS2IntrusionAlarmZone IntrusionAlarmZone;
    BS2AlarmZoneMember* memberObjs;
    BS2AlarmZoneInput* inputObjs;
    BS2AlarmZoneOutput* outputObjs;
    BS2CSNCard* cardObjs;
    BS2_D00R_ID* doorIDs;
    BS2_ACCESS_GROUP_ID* groupIDs;
} BS2IntrusionAlarmZoneBlob;
```

1. *IntrusionAlarmZone*

2. *memberObjs*

IntrusionAlarmZone.numReaders

3. *inputObjs*

IntrusionAlarmZone.numInputs

4. *outputObjs*

IntrusionAlarmZone.numOutputs

5. *cardObjs*

IntrusionAlarmZone.numCards

[Smartcard API](#)

6. *doorIDs*

IntrusionAlarmZone.numDoors

7. *groupIDs*

IntrusionAlarmZone.numGroups

BS2InterlockZone

```
typedef struct {
    uint32_t zoneID;
    char name[BS2_MAX_ZONE_NAME_LEN];
    uint8_t disabled;
    uint8_t numInputs;
    uint8_t numOutputs;
    uint8_t numDoors;
    uint8_t reserved[8];
}
```

```
} BS2InterlockZone;
```

1. *zoneID*
1가.
2. *name*
BioStar.
3. *disabled*
flag.
4. *numInputs*
.
5. *numOutputs*
.
6. *numDoors*
.
7. *reserved*
.

BS2InterlockZoneBlob

```
typedef struct {  
    BS2InterlockZone InterlockZone;  
    BS2InterlockZoneInput* inputObjs;  
    BS2InterlockZoneOutput* outputObjs;  
    BS2_D00R_ID* doorIDs;  
} BS2InterlockZoneBlob;
```

1. *InterlockZone*
.
2. *inputObjs*
.

InterlockZone.numInputs
3. *outputObjs*
.

InterlockZone.numOutputs
4. *doorIDs*
.

InterlockZone.numDoors

BS2DeviceZoneEntranceLimitMaster

```
typedef struct {
    char name[BS2_MAX_ZONE_NAME_LEN];
    uint8_t type;
    uint8_t reserved1[3];
    uint32_t entryLimitInterval_s;
    uint8_t numEntranceLimit;
    uint8_t numReaders;
    uint8_t numAlarm;
    uint8_t numBypassGroups;
    uint8_t maxEntry[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE];
    uint32_t periodStart_s[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE];
    uint32_t periodEnd_s[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE];
    BS2DeviceZoneEntranceLimitMemberInfo
    readers[BS2_MAX_READERS_PER_DEVICE_ZONE_ENTRANCE_LIMIT];
    BS2Action alarm[BS2_MAX_DEVICE_ZONE_ENTRANCE_LIMIT_ALARM_ACTION];
    BS2_ACCESS_GROUP_ID
    bypassGroupIDs[BS2_MAX_BYPASS_GROUPS_PER_DEVICE_ZONE_ENTRANCE_LIMIT];
    uint8_t reserved3[8 * 4];
} BS2DeviceZoneEntranceLimitMaster;
```

- 1. *name*
BioStar
- 2. *type*

1	Soft EntranceLimit(가)
2	Hard EntranceLimit()

- 3. *reserved1[3]*
- 4. *entryLimitInterval_s*
- 5. *numEntranceLimit*
- 6. *numReaders*
reader
- 7. *numAlarm*
- 8. *numBypassGroups*
- 9. *maxEntry*

10. <i>periodStart_s</i>					
가	.	(		)	
11. <i>periodEnd_s</i>					
가	.	(		)	
12. <i>readers</i>					
			64		.
13. <i>alarm</i>					
		5			.
14. <i>bypassGroupIDs</i>					
			16		.
15. <i>reserved3</i>					.

BS2DeviceZoneEntranceLimitMember

```
typedef struct {
    uint16_t masterPort;
    BS2_DEVICE_ZONE_ENTRANCE_LIMIT_DISCONNECTED_ACTION_TYPE
actionInDisconnect;
    uint8_t reserved1[1];
    BS2_IPV4_ADDR masterIP;
} BS2DeviceZoneEntranceLimitMember;
```

1. *masterPort*
master port .
2. *actionInDisconnect*
Disconnect .

1	Soft EntranceLimit Disconnected action(가)
2	Hard EntranceLimit Disconnected action()

3. *reserved1[3]*
.
4. *masterIP*
master IP .

BS2DeviceZoneFireAlarmMaster

```
typedef struct {
    char name[BS2_MAX_ZONE_NAME_LEN];
    uint8_t numReaders;
    uint8_t numAlarm;
    uint8_t reserved1[2];
    BS2DeviceZoneFireAlarmMemberInfo
    readers[BS2_MAX_READERS_PER_DEVICE_ZONE_FIRE_ALARM];
    BS2Action alarm[BS2_MAX_DEVICE_ZONE_FIRE_ALARM_ALARM_ACTION];
    uint8_t reserved2[8 * 40];
} BS2DeviceZoneFireAlarmMaster;
```

1. *name*

BioStar

2. *numReaders*

3. *reserved1*

4. *readers*

5. *alarm*

5

6. *reserved2*

BS2DeviceZoneFireAlarmMember

```
typedef struct {
    BS2_PORT masterPort;
    uint8_t reserved1[2];
    BS2_IPV4_ADDR masterIP;
    uint8_t numSensors;
    uint8_t numDoors;
    uint8_t reserved2[2];
    BS2DeviceZoneFireSensor
    sensor[BS2_MAX_FIRE_SENSORS_PER_DEVICE_ZONE_FIRE_ALARM_MEMBER];
    union {
        BS2_D00R_ID
    doorIDs[BS2_MAX_DOORS_PER_DEVICE_ZONE_FIRE_ALARM_MEMBER];
        BS2_LIFT_ID
    liftIDs[BS2_MAX_DOORS_PER_DEVICE_ZONE_FIRE_ALARM_MEMBER];
    };
};
```

```
} BS2DeviceZoneFireAlarmMember;
```

1. *masterPort*

master port .

2. *reserved1*

.

3. *masterIP*

master IP .

4. *numSensors*

.

5. *numDoors*

.

6. *reserved2*

.

7. *sensor*

8

.

8. *doorIDs*

8

.

9. *liftIDs*

Lift

8

.

BS2DeviceZoneFireAlarmMemberInfo

```
typedef struct {
    uint32_t readerID;
} BS2DeviceZoneFireAlarmMemberInfo;
```

1. *readerID*

.

BS2DeviceZoneFireSensor

```
typedef struct {
    uint32_t deviceID;
    uint8_t port;
    uint8_t switchType;
    uint16_t duration;
} BS2DeviceZoneFireSensor;
```

1. *deviceID*

2. *port*

3. *switchType*

0	
1	

4. *duration* millisecond

BS2DeviceZone

```
typedef struct {
    uint32_t zoneID;
    uint8_t zoneType;
    uint8_t nodeType;
    uint8_t enable;
    uint8_t reserved[1];
    union {
        BS2DeviceZoneEntranceLimitMaster entranceLimitMaster;
        BS2DeviceZoneEntranceLimitMember entranceLimitMember;
        BS2DeviceZoneFireAlarmMaster fireAlarmMaster;
        BS2DeviceZoneFireAlarmMember fireAlarmMember;
    };
} BS2DeviceZone;
```

1. *zoneID* 1 가

2. *zoneType*

3. *nodeType*

4. *enable* flag

5. *reserved[1]*

BS2DeviceZoneAGEntranceLimit

```
typedef struct {
```

```

uint32_t zoneID;
uint16_t numAGEntranceLimit;
uint16_t reserved1;
uint32_t periodStart_s[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE];
uint32_t periodEnd_s[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE];
uint16_t numEntry[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE];
uint16_t
maxEntry[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE][BS2_MAX_ACCESS_GROUP_ENTRANCE_LIMI
T_PER_ENTRANCE_LIMIT];
uint32_t
accessGroupID[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE][BS2_MAX_ACCESS_GROUP_ENTRANCE
_LIMIT_PER_ENTRANCE_LIMIT];
} BS2DeviceZoneAGEntranceLimit;

```

1. *zoneID*

1 가 .

2. *numAGEntranceLimit*

.

3. *reserved1*

.

4. *periodStart_s*

가 .

5. *periodEnd_s*

가 .

6. *numEntry*

.

7. *maxEntry*

.

8. *accessGroupID*

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