Zone Control API

Zone Control API

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- [BS2_GetAntiPassbackZone](): .
- [BS2_GetAllAntiPassbackZone](): .
- [BS2_GetAntiPassbackZoneStatus](): .
- [BS2_GetAllAntiPassbackZoneStatus](): .
- [BS2_SetAntiPassbackZone](): .
- [BS2_SetAntiPassbackZoneAlarm](): .
- [BS2_RemoveAntiPassbackZone](): .
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- [BS2_ClearAntiPassbackZoneStatus](): .
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- [BS2_SetCheckGlobalAPBViolationHandler](): .
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- [BS2_GetTimedAntiPassbackZone](): .
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- [BS2_ClearAllTimedAntiPassbackZoneStatus](): .

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- [BS2_GetFireAlarmZone](): .
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- [BS2_GetScheduledLockUnlockZone](): / .
- [BS2_GetAllScheduledLockUnlockZone](): / .
- [BS2_GetScheduledLockUnlockZoneStatus](): /
  .
- [BS2_GetAllScheduledLockUnlockZoneStatus](): /
  .
- [BS2_SetScheduledLockUnlockZone](): / .
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- [BS2_GetIntrusionAlarmZone](): .
- [BS2_GetIntrusionAlarmZoneStatus](): .
- [BS2_GetAllIntrusionAlarmZoneStatus](): .
- [BS2_SetIntrusionAlarmZone](): .
- [BS2_SetIntrusionAlarmZoneAlarm](): .
- [BS2_RemoveIntrusionAlarmZone](): .
- [BS2_RemoveAllIntrusionAlarmZone](): .
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[CoreStation]

CoreStation

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

Ethernet

Zone Master BioStar V2.x (Master ↔ Member)
Ethernet TCP Zone . 1.x Entrance Limit, Fire Alarm Zone

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

OnCheckGlobalAPBViolation

```
typedef void (*OnCheckGlobalAPBViolation)(uint32_t deviceId, uint16_t seq,
const char* userID_1, const char* userID_2, bool isDualAuth);
```

1. *OnCheckGlobalAPBViolation*

.

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 ．

2. *name*
BioStar ．

3. *type*

．

0	Hard APB( )
1	Soft APB( )

4. *numReaders*
APB reader .

5. *numBypassGroups*
APB .

6. *disabled*
flag .

7. *alarmed*
.

8. *reserved*
.

9. *resetDuration*
APB .
0 , BioStar
.

10. *alarm*
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*

1   .

2. *name*
BioStar   .

3. *type*

.

0	Hard APB( )
1	Soft APB( )

4. *numReaders*

reader   .

5. *numBypassGroups*

.

6. *disabled*

flag   .

7. *alarmed*

.

8. *reserved*

.

9. *resetDuration*

.   ,   0   ,   BioStar
.

10. *alarm*

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*

　　　　　　　　1　　　　　　　　　　　　　　　.

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　　　　　　　　　　　　　.

2. *name*
BioStar　　　　　　　　　　　　　　　　　.

3. *lockScheduleID*
　　　　　　　　　　　　　　　　　　　　　　.

4. *unlockScheduleID*
　　　　　　　　　　　　　　　　　　　　　　.

5. *numDoors*
　　　　　　　　　　　.

6. *numBypassGroups*
　　　　　　　　　　　　　　　　　.

7. *numUnlockGroups*
　　　　　　　　　　　　　　　　　　.

8. *bidirectionalLock*
　　　　　　　　　　　　　　　　　　　.

9. *disabled*
　　　　flag　　　　　　　.

10. *alarmed*
　　　　　　　　　　　.

11. *reserved*
　　　　　　.

12. *alarm*
　　　　　　　　　　　5　　　　　　　　　　　.

13. *reserved2*
　　　　　　.

14. *doorIDs*

32 .

15. *bypassGroupIDs*

16

.

16. *unlockGroupIDs*

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 .

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_DOOR_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*
                    1   .

2. *name*
BioStar   .

3. *disabled*
                flag   .

4. *numInputs*
                                                              .

5. *numOutputs*
                                              .

6. *numDoors*
                                              .

7. *reserved*
                              .

BS2InterlockZoneBlob

```
typedef struct {
    BS2InterlockZone InterlockZone;
    BS2InterlockZoneInput* inputObjs;
    BS2InterlockZoneOutput* outputObjs;
    BS2_DOOR_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( )
2	Hard EntranceLimit( )

3. *reserved1[3]*
.

4. *entryLimitInterval_s*
                   .

5. *numEntranceLimit*
                   .

6. *numReaders*
            reader   .

7. *numAlarm*
                   .

8. *numBypassGroups*
                                    .

9. *maxEntry*
                   .

10. *periodStart_s*
                        . (   )

11. *periodEnd_s*
                        . (   )

12. *readers*
                                    64   .

13. *alarm*
                              5   .

14. *bypassGroupIDs*
                                    16   .

15. *reserved3*
             .

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(	)
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_DOOR_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 .

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_ENTRACE_LIMIT];
    uint32_t
accessGroupID[BS2_MAX_ENTRANCE_LIMIT_PER_ZONE][BS2_MAX_ACCESS_GROUP_ENTRANCE
_LIMIT_PER_ENTRACE_LIMIT];
} BS2DeviceZoneAGEntranceLimit;
```

1. *zoneID*

1   .

2. *numAGEntranceLimit*

.

3. *reserved1*

.

4. *periodStart_s*

.

5. *periodEnd_s*

.

6. *numEntry*

.

7. *maxEntry*

.

8. *accessGroupID*

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