



DATASHEET: OCTOBER 2019

# DIVUS HEARTBEAT

... a first of its kind solution for a stable, secure and controlled network!

DHB-BUNDLE - DHB-MANAGER - DHB-MANAGER-SLIM - DHB-SWITCH

# DIVUS HEARTBEAT

## HARDWARE-SOFTWARE SOLUTION FOR NETWORK MANAGEMENT

	DHB-BUNDLE	DHB-MANAGER	DHB-MANAGER-SLIM	DHB-SWITCH
Type of design	DIVUS HEARTBEAT is a hardware-software solution, which is composed of a POE+ capable managed switch and an innovative manager. Integrated into the network, it is the heart of a smart building and ensures a secure and stable connection between DIVUS devices. It's software provides novel functionalities that will benefit system integrator as well as the end-user such as system-wide configuration for an easy and quick installation, system scan, real-time monitoring, usage analytics and system diagnostics and trouble-shooting support through automatically generated system reports			

### VERSIONS

Type	DHB-Bundle	DHB-Manager	DHB-Manager-slim	DHB-Switch
Description	DIVUS Heartbeat Manager bundled with DHB-Switch rack mountable	DIVUS Heartbeat Manager rack mountable	DIVUS HEARTBEAT Manager slim - case in desktop version	DIVUS MANAGED SWITCH - POE+ capable managed 8 port-switch

### GENERAL HARDWARE SPECIFICATION

Power supply	100-240VAC, 50/60Hz		12 VDC 100-240VAC, 50/60Hz with external power supply	100-240VAC, 50/60Hz
Power consumption	Max. 5A (100 VAC)	Max. 1A (100 VAC) /max. 0,55A (240VAC)		Max. 4A (100 VAC)
Dimension (WxDxH)	483 x 200 x 88, 2U	330 x 200 x 43.5 mm, 1U	170 x 160 x 30 mm	330 x 200 x 43.5 mm, 1U
Weight	ca. 3.5 kg	ca. 1.5 kg	ca. 0.5 kg	ca. 2.0 kg
Temp. range (operating)	Temperature: +5°C ... +45°C Relative humidity: 5% ... 80% at 25°C (no humidity/condense)			
Temp. range (storage)	Temperature: -10°C ... +60°C Relative humidity: 5% ... 80% at 25°C (no humidity/condense)			
Rating	IP20 according EN 60529			
EMC	EN 55011, 55022, 500081			
Authorization	CE			

### GENERAL CHARACTERISTICS

Processor	AMD G series GX-412TC, 1 GHz quad core (Jaguar core) with 64 bit support			-
Memory	2 GB DDR3-1333 DRAM			-
Storage medium	High quality flash storage			-
Guarantee	24 Months*	24 Months*	24 Months*	24 Months*

### CONNECTIVITY

Home LAN-WAN	1 x RJ45 connected to home internal network			-
Residential intercom	1 x RJ45 high secure LAN firewall protection			-
DIVUS SECURE INTRANET	1 x RJ45 secure LAN firewall protection			-
Console Serial Port	1 x DB9 Basic config (19200 8, N, 1)			1 x RJ45 (115200,8,N,1)
USB	2 x basic config			-
POE standard IEEE 802.3af/802.3at PoE/PSE	8 x PoE+(Port1-8),total PoE+ power budget control,max. 30.8W per port(240 W total)	-	-	8 x PoE+(Port1-8),total PoE+ power budget control,max. 30.8W per port(240 W total)
dedicated port for connection to the manager	1 x RJ45 (used)	-	-	1 x RJ45
dedicated port for connection to another switch	1 x RJ45	-	-	1 x RJ45

# DIVUS HEARTBEAT

## DHB-MANAGER AND DHB-MANAGER-SLIM MAIN FUNCTIONS

	DHB-BUNDLE	DHB-MANAGER	DHB-MANAGER-SLIM	DHB-SWITCH
<b>FUNCTIONALITIES</b>				
VoiP server	✓	✓	✓	✗
VoiP call logging	✓	✓	✓	✗
Managing of multiple switches	✓	✓	✓	✗
Firewall protection of Home LAN and DIVUS SECURE NET	✓	✓	✓	✗
Firewal protection of external residential network to Home LAN and DIVUS SECURE NET	✓	✓	✓	✗
Network scan	✓	✓	✓	✗
Generate network report	✓	✓	✓	✗
Sending network report by email	✓	✓	✓	✗
Network diagram	✓	✓	✓	✗
Network logging	✓	✓	✓	✗
Network diagnostic	✓	✓	✓	✗
Loop protection	✓	✓	✓	✗
DIVUS device control	✓	✓	✓	✗
DIVUS device manage	✓	✓	✓	✗
DIVUS device configuration	✓	✓	✓	✗
DIVUS device logging	✓	✓	✓	✗
DHCP server to DIVUS SECURE INTRANET	✓	✓	✓	✗
NTP server to DIVUS SECURE IN-TRANET	✓	✓	✓	✗

\* warranty ex works, normally 24 months, fixed at order. All data refer on print date, errors and changes excepted.

NOTE: Internal connections are intended as inside the box unit, normally on pin header, external ones as outside the box. Nevertheless, once mounted in the wall, only connections described as "front accessible" will be reachable for the customer.

# DIVUS HEARTBEAT

## DHB-SWITCH MAIN FUNCTIONS

### DHB-BUNDLE OR DHB-SWITCH USED WITH DHB-MANAGER OR DHB-MANAGER SLIM

#### HARDWARE SPECIFICATION

Copper ports	10x10/100/1000BASE-T RJ45 Auto-MDI/MDI-X ports
Switch architecture	Store-and-forward
Address table	8K entries, automatic source address learning and aging
Flow control	IEEE 802.3x pause frame for full-duplex. Back pressure for half-duplex
Reset button	< 5 sec: system reboot, > 5 sec: factory default
Switch fabric	24Gbps / non-blocking
LED	System: Fan Alert (Green), SYS (Green), PWR (Green)
	10/100/1000T RJ45 Interfaces (Port 1 to Port 8): 10/100/1000Mbps LNK/ACT (Green), PoE-in-Use (Orange)
	10/100/1000T RJ45 Interfaces (Port 9 to Port 10): LNK/ACT (Green), 1000Mbps (Orange)
	100/1000Mbps SFP Combo Interfaces (Port 11 to Port 12): LNK/ACT (Green), 1000Mbps (Orange)

#### POWER OVER ETHERNET

PoE Standard	IEEE 802.3af/802.3at PoE/PSE, End-span, Power Pin Assignment 1/2(+), 3/6(-)
PoE Power Output	<b>Per port 54V DC, max. 30.8 watts</b>
PoE Power Budget	<b>240 watts (max.) @ 25° C</b> , 200 watts (max.) @ 50° C
PoE Ability	PD @ 7 watts: 8 units, PD @ 15.4 watts: 8 units, PD @ 30.8 watts: 8 units
PoE Management	Auto detects powered device (PD), circuit protection prevents power interference between ports, remote power feeding up to 100 meters, <b>total PoE power budget control</b> , per port PoE function enable/disable, PoE Port Power feeding priority, per PoE port power limitation, PD classification detection, PD alive check, PoE schedule, PD power recycling schedule

#### LAYER2 MANAGEMENT FUNCTIONS

Basic Management Interfaces	Console, Telnet, Web browser, SNMP v1, v2c
Secure Management Interfaces	SSH, SSL, SNMP v3
Port Configuration	Port disable/enable, auto-negotiation 10/100/1000Mbps full and half duplex mode selection, flow Control disable/enable
Port Status	Display each port's speed duplex mode, link status, flow control status, auto negotiation status, trunk status
Port Mirroring	TX/RX/Both, many-to-1 monitor
VLAN	802.1Q tagged based VLAN, up to 255 VLAN groups, Q-in-Q tunneling, private VLAN Edge (PVE), MAC-based VLAN, Protocol-based VLAN,voice VLAN, MVR (Multicast VLAN Registration), up to 255 VLAN groups, out of 4094 VLAN IDs
Link Aggregation	IEEE 802.3ad LACP/Static Trunk, Supports 6 trunk groups with 8 ports per trunk
QoS	Traffic classification based, strict priority and WRR, 8-level priority for switching
IGMP Snooping	IGMP (v1/v2/v3) Snooping, up to 255 multicast groups, IGMP Querier mode support
MLD Snooping	MLD (v1/v2) Snooping, up to 255 multicast groups, MLD Querier mode support
Access Control List	IP-based ACL/MAC-based ACL, Up to 256 entries
Bandwidth Control	Per port bandwidth control, Ingress: 100Kbps~1000Mbps, Egress: 100Kbps~1000Mbps
SNMP MIBs	RFC 1213 MIB-II, RFC 2863 IF-MIB, RFC 1493 Bridge MIB, RFC 1643 Ethernet MIB, RFC 2863 Interface MIB, RFC 2665 Ether-Like MIB, RFC 2737 Entity MIB, RFC 2819 RMON MIB (Groups 1, 2, 3 and 9), RFC 2618 RADIUS Client MIB, RFC 3411 SNMP-Frameworks-MIB, IEEE 802.1X PAE, LLDP, MAU-MIB, Power over Ethernet MIB

#### LAYER3 FUNCTIONS

IP Interfaces	Max. 8 VLAN interfaces
Routing Table	Max. 32 routing entries
Routing Protocols	IPv4 software static routing, IPv6 software static routing