Haivision

DVB to IP Gateway

Capture Satellite and Terrestrial Digital Broadcast Signals Haivision's Torpedo™ allows enterprises to get digital broadcast transmission onto their IP networks without the need for re-encoding the video. Digital satellite (DVB-S/S2) and digital terrestrial (DVB-T/T2) broadcasts contain audio/video programming using industry standard compression (MPEG-2 or H.264) contained within MPEG-2 transport streams. The Torpedo gateway tunes to a particular frequency as delivered over RF by the DVB antennas or satellite dishes, extracts and filters the MPEG transport stream packets, and delivers the program content over IP networks eliminating the need to re-encode. A single Torpedo can support up to 15 content channels and then re-broadcast them as unicast or multicast IP video data streams.

Conditional Access Module (CAM) Coupled with Re-Encryption The Torpedo optionally includes a standard DVB-CI slot to allow decryption, decoding and streaming of Pay TV content with a suitable CAM card and smartcard subscription license. When coupled with Haivision's Furnace™ IP video system, organizations can adhere to content protection requirements by applying encryption for internal secure multicast IP video delivery.

High Value, Low Cost IPTV Haivision's Torpedo DVB to IP gateways deliver simple and affordable IPTV by combining InStream Amino and Amino set-top boxes. Haivision developed the InStream Amino firmware for the Amino AmiNET 140™ series IPTV STB to display video without the need for a middleware server. InStream Amino displays the electronic program guides (EPG) available directly from the Torpedo DVB gateways. The total cost for a complete IPTV solution with InStream Amino is amongst the most affordable on the market. It is ideal for IPTV deployments in enterprises, schools, and stadiums. InStream Amino is available from Haivision's Download Center.

Product **Features**   Product **Benefits**

Product Features	Product Benefits
No re-encoding	Eliminate costly IRD/encoder workflows
Compact form factor	High density with 6 DVB receivers per 1RU
High density	Up to 15 live channels per blade, up to 6 blades per 1RU
Chassis compatible with Makito	Integrate satellite/baseband headends
Secure distribution	Adhere to content protection requirements with Furnace VF Encrypt
HTTP, CLI, and SNMP	Integrate with workflows of existing control systems
InStream Amino support	Deliver high value, low cost IPTV
Transcoding with Kraken	Transcode high bitrate DVB streams for desktops

TORPEDO BLADE (X-380-X)
INPUT INTERFACE (X-380-T2 MODELS)
DVB-T, DVB-T2
  75 ohm IEC 169-2 aerial input connector
  75 ohm IEC 169-2 aerial output connector (for pass-through or signal monitoring)

INPUT INTERFACE (X-380-S2 MODELS)
DVB-S, DVB-S2
  75 ohm F-type input connector
  75 ohm F-type output connector (for signal monitoring)

CAM MODULE (X-380-XXCAM MODELS)
  DVB-CI (EN 50221) including support for Man Machine Interface (MMI)
  Decryption of multiple channels with suitable CAM and subscription card

STREAMING PROTOCOLS
  Unicast streaming
  Multicast streaming
  MPEG transport stream over UDP
  10/100 Base-T network
  Session Announcement Protocol (SAP)

MANAGEMENT AND CONTROL
IP:
  10/100 Base-T interface
USB:
  USBv1.1 interface for control and configuration

CAPACITIES
Simultaneous Streams
  15 unicast/multicast channels from a single multiplex

APPLIANCE (S-380-X)
Dimensions:
  41mm H x 143mm W x 220mm D
  (1.7" H x 5.7" W x 8.7" D)
Weight:
  1.1Kg (2.42lbs)
Power:
  100-240V AC, 10 Watts via external DC adaptor
Environmental:
  0-40°C; 32-104°F
Certification:
  CE, CB
  FCC Part 15

6 BLADE CHASSIS (F-MB6B-RAC, F-MB6B-MED, F-MB6B-DC)
Dimensions:
  19" rack mountable, 1RU
  43.69mm H x 434.98mm W x 420.37mm D
  (1.72"H x 17.125"W x 16.55"D)
Weight:
  6 slot empty chassis – 8Kg (17.5 lbs.)
  Each blade – 0.23Kg (0.5 lbs.)
Power (internal power supply):
  Redundant AC type 90-264VAC 47Hz-63Hz
  300 Watt max.
  Medical Grade 90-264VAC 47Hz-63Hz
  300 Watt max.
  DC type 20-36 VDC
  300 Watt max.
Operating Temperature:
  Operating: 0°C to 50°C (32°F to 122°F)
  Non-Operating: -40°C to 70°C (-40°F to 158°F)
Humidity:
  up to 85% non-condensing

21 BLADE CHASSIS (F-MB21B-R)
Dimensions:
  19" rack mountable, 4 RU
  178mm H x 439.98mm W x 460mm D
  (7.00"H x 17.125"W x 18.00"D)
Weight:
  21 slot empty chassis – 17.25Kg (38 lbs.)
  Each blade – 0.23Kg (0.5 lbs.)
Power (internal power supply):
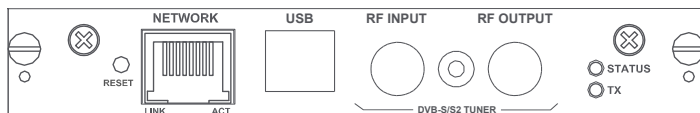 90-132V and 180-240VAC 47Hz-63Hz
  400 Watt max.
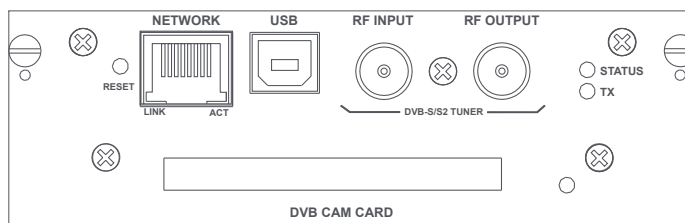*Temperature:*
  Operating: 0°C to 40°C (32°F to 104°F).
  Non-Operating: -40°C to 70°C (-40°F to 158°F).
Humidity:
  up to 95% non-condensing

Torpedo

Torpedo with CAM option

Torpedo Product Portfolio & Ordering Information **

Torpedo DVB-T/T2	**S/B-380-T2**	Torpedo DVB-T/T2 to IP Gateway Appliance/Blade, for Non US Markets Only – DVB-T/T2 RF input & loop-thru, up to 15 channels, IP UDP multicast/unicast, 10/100 Ethernet, USB, 90-240 VAC external power
Torpedo DVB-T/T2 with CAM	**S/B-380-T2CAM**	Torpedo DVB-T/T2 to IP Gateway Appliance/Blade, for Non US Markets Only – DVB-T/T2 RF input with DVB-CI slot & loop-thru, up to 15 channels, IP UDP multicast/unicast, 10/100 Ethernet, USB, 90-240 VAC external
power Torpedo DVB-T2 MB6 Bundle	**S-380-T2-MB6**	6 Bundled B-380-T2 in an MB6 chassis
Torpedo DVB-S/S2	**S/B-380-S2**	Torpedo DVB-S/S2 to IP Gateway Appliance/Blade – DVB-S/S2 RF input & loop-thru, up to 15 channels, IP UDP multicast/unicast, 10/100 Ethernet, USB, 90-240 VAC external power
Torpedo DVB-S/S2 with CAM	**S/B-380-S2CAM**	Torpedo DVB-S/S2 to IP Gateway Appliance/Blade – DVB-S/S2 RF input with DVB-CI slot & loop-thru, up to 15 channels, IP UDP multicast/unicast, 10/100 Ethernet, USB, 90-240 VAC external power
Torpedo DVB-S2 MB6 Bundle	**S-380-S2-MB6**	6 Bundled B-380-S2 in an MB6 chassis

** For complete pricing and ordering, contact us at sales@haivision.com or your certified haivision reseller.