The IDU 2070 is an MF-TDMA modem with built-in IP routing, frame relay switching and support for multicast transmissions. It includes the most comprehensive feature set of the SKYWAN remote product family. Each IDU 2070 includes one Ethernet/Fast Ethernet port and up to four serial or Frame Relay ports thus providing a full range of standard IP and legacy interfaces with support for protocols such as V.24, HDLC, X.25 plus analog and digital voice channel capability.

The IDU 2070 has the capability to supply a low power BUC such as the RFT 2000 series and to supply power to the LNB. The WGS compliant IDU 2070 supplies only power to the LNB. SKYWAN IDU 2070 offers military-grade features and options to meet the growing governmental demand for highly secure and reliable communications.

The embedded cryptographic module is compliant to the Federal Information Processing Standard (FIPS) 140-2 Level 3 providing certified encryption algorithms (AES 256) and tamper-evident physical security mechanisms. The SKYWAN IDU 7000 modem is compliant to the Wideband Global SATCOM (WGS) system delivering high signal quality over WGS and commercial satellites. SKYWAN combined with the Ranger antenna builds a lightweight, easy deployable terminal configurable for C, X, Ku or Ka-Band whereas the X-Band configuration is XTAR, DCSC & WGS compatible.

SKYWAN FAD – Designed to provide maximum network performance and reliability in low-bandwidth environments, this universal access device reduces network infrastructure costs and simplifies WAN connectivity for mission-critical applications. The voice and data compression technology, prioritization and multiplexing capabilities and the ability to route all traffic over a highly efficient cell-relay based protocol, make it the product of choice for converged voice and data applications over satellite. The SKYWAN FAD provides a safe migration path from legacy TDM or Frame Relay networks to IP-centric networks. It includes support for the latest VoIP (SIP) standards and robust IP/Ethernet QoS.
TECHNICAL SPECIFICATIONS – SKYWAN IDU 2070

**CONFIGURATION**

- **Network Topology**: True full mesh / star / hybrid / multi-star
- **Encoding**: Turbo
- **Eb / No**: 2.6 dB at FEC 1/2 with BER 10^-7
- **Channel Spacing / Roll-off**: 1.2 , 1.4 / 0.2 , 0.4
- **Modem Symbol Rate**: 100 Kbaud – 6 MBaud, variable in 1 Kbaud increments
- **User Data Rate**: 64 Kbit/s – 10 Mbit/s
- **Satellite Channel Access Type**: MF-TDMA / datarate hopping / multiple carrier hopping / transponder hopping / cross-strapping
- **Optional WGS compliant modem**: (1)
- **Access Scheme**: Bandwidth-on-Demand / real-time / non-real-time / guaranteed throughput / QoS classes
- **Security**: Optional FIPS 140-2 Level 3 validated (2) LINK ENCRYPTION with AES 256 Encryption and internal Key Management

**INTERFACES**

- **Serial Interfaces**: 4 serial ports, each with individual clock & up to 6144 Kbit/s X.21 / RS-449 / RS-232C and V.35 on each port selectable
- **Protocol**: UNI/NNI / Isochronous / Transparent
- **LAN Interface**: One 10/100 Base-T Ethernet RJ-45 port
- **Modulator**: L-Band 950 – 1750 MHz / 0…-30 dBm / SMA female connector, 50ohm, max. 2.6 A at 24 VDC
- **Demodulator**: L-Band 950 – 1750 MHz / -35…-75 dBm / SMA female connector, 50ohm, max. 700 mA at 24 VDC
- **10 MHz reference signal**: Configurable on Tx / Rx / reference clock output, SMA female connector, 50ohm

**SKYWAN FAD**

- **Type / System Overview**: Universal access device combining the functionality of a data router, a multiplexer and a voice gateway in a single device, enabling users to create converged networks and transport any type of traffic over satellite or terrestrial links.
- **Interfaces**: Analog & Digital with standard protocols, allows interconnection to any PABX or PSTN. X25, Frame Relay, HDLC
- **PTT**: support for analog & digital VHF systems, signaling either in-band / V24 / E&M

**RADIOS**

- **RFT 2000**: C-Band 5 W, Ku-Band 3 / 4 / 6 W
- **WGS compliant version of IDU 2070 does only power the LNB.**
- **Others**: Radios with L-Band interface, LNBs with external clock reference from SKYWAN

**NETWORK MANAGEMENT**

- **NMS Platform**: SKYWAN NMS
- **NMS Architecture**: Central station, additional stations may be used for monitoring
- **IDU Management Interfaces**: Remote access with in-band management (from central NMS station over satellite) via SNMP. Remote access with dial-in (via public telephone network with aached modem) Local access via integrated console port EIA-232
- **Lineup Manager**: Easy tool to commission remote SKYWAN sta on via local console port or Ethernet port
- **Security NMS & Station**: Authentication of NMS station / dedicated IP Network for management / authentication of remote station

**MECHANICAL / ENVIRONMENTAL**

- **Dimensions (H x W x D)**: 89 mm (2 RU) x 483 mm (19") x 470 mm
- **Weight**: 8,0 kg
- **Input Power / Power Consumption**: 90 – 264 VAC , 50 / 60 Hz , 160 VA nominal (with external load of 3.5 A at 24 V DC)
- **Operating Temperature / Humidity**: +5 °C to +40 °C, 5% - 85 % non-condensing
- **Altitude**: Up to 3000 m above sea level
- **Compliance**: Fully CE compliant with RoHS and REACH
- **Radio Standards**: EN 301 428 Ku-Band VSA T
- **EN 301 443 C-Band VSA T**
- **Safety**: EN 60950 Safety IT Equipment
- **Emission Standards**: EN 61000-6-3 Generic Emission Standard
- **EN 61000-3-2 Harmonics**
- **EN 61000-3-3 Flicker**
- **Immunity Standard**: EN 61000-6-1 Generic Immunity Standard

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(1) JSEC testing completed, ARSTRAT/DISA certification pending; (2) NIST certificate 2277 (year 2014); * separate Datasheets available

**HEADQUARTER**

ND SatCom GmbH
Graf-von-Soden-Strasse 88090 Immenstaad
Germany
PHONE: +49 7545 939 0
FAX: +49 7545 939 8780
E-Mail: info@ndsatcom.com

**CHINA**

ND SatCom (Beijing) Co. Ltd.
PHONE: +86 10 6590 6869/6878

**www.ndsatcom.com**

**MIDDLE EAST**

ND SatCom FZE
PHONE: +97148865012