

ARG Common Host API

Integration Overview

One binary serial protocol across every ARG connectivity module.

What it is

The ARG Common Host API is a single binary serial protocol between any ARG host board and any ARG connectivity module — Cellular, Wi-Fi, or G3-PLC power line. The host application is identical no matter which radio is fitted, so you can design one product and choose (or swap) connectivity at production time with no host firmware changes.

At a glance

Interface	UART — 460800 baud, 8N1, hardware flow control (RTS/CTS)
Framing	Byte-framed: start-of-frame sync, version, message type, length, payload, CRC16-CCITT
Max payload	512 bytes per frame
Connector	Common 10-pin footprint shared across every ARG module
Model	Host sends payloads and receives data; the module handles the radio, TLS, MQTT, retry, offline buffering, and firmware updates autonomously

The host board

- Sends data payloads to publish
- Polls module status when needed
- Sets identity and configuration
- Needs no radio, TLS, or cloud knowledge

The connectivity module

- Connects and keeps the link up
- Encrypts traffic (TLS) to the cloud
- Queues data when offline, sends when back
- Forwards inbound cloud messages to the host
- Updates its own firmware over the air

Compatible modules

Module	Technology	Typical use
Cellular	LTE-M / NB-IoT (nRF9160)	Remote and field sites, no local network
Wi-Fi / BLE	802.11 b/g/n (NINA-W131)	Campus and facility Wi-Fi
G3-PLC (HPLR)	Hybrid G3-PLC + RF, CENELEC-B	Networking over existing AC wiring

Need the full protocol specification?

The complete Host API spec — message reference, payload layouts, and integration support — is available to qualified integrators. Contact us and we'll get you set up.

Contact us →