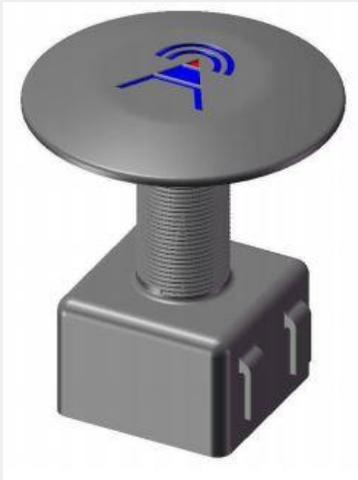


NOVA Endpoint



PRODUCT OVERVIEW



Capstone Metering has developed the Nova LTE-M/NB-IoT Endpoint to provide water utilities with efficient two-way communication. The Nova LTE-M/NB-IoT Endpoint works on multiple carriers and transmits data across existing cellular networks nationwide. This gives the Nova maximum coverage, even in rural areas at ground level. The endpoint has theft detection, lid tilt alerts and GPS to help the utility protect its assets. These alerts can be sent to the IntelliH2O® WMA (Water Management Application) or to a mobile device.

CELLULAR PARTNERS

Capstone has partnered with AT&T to maximize coverage across the United States. The LTE-M/NB-IoT bands are Low Power Wide Area Network (LPWAN) technology. Which is perfect for the Nova which mounts through the meter lid or wall of the meter box.



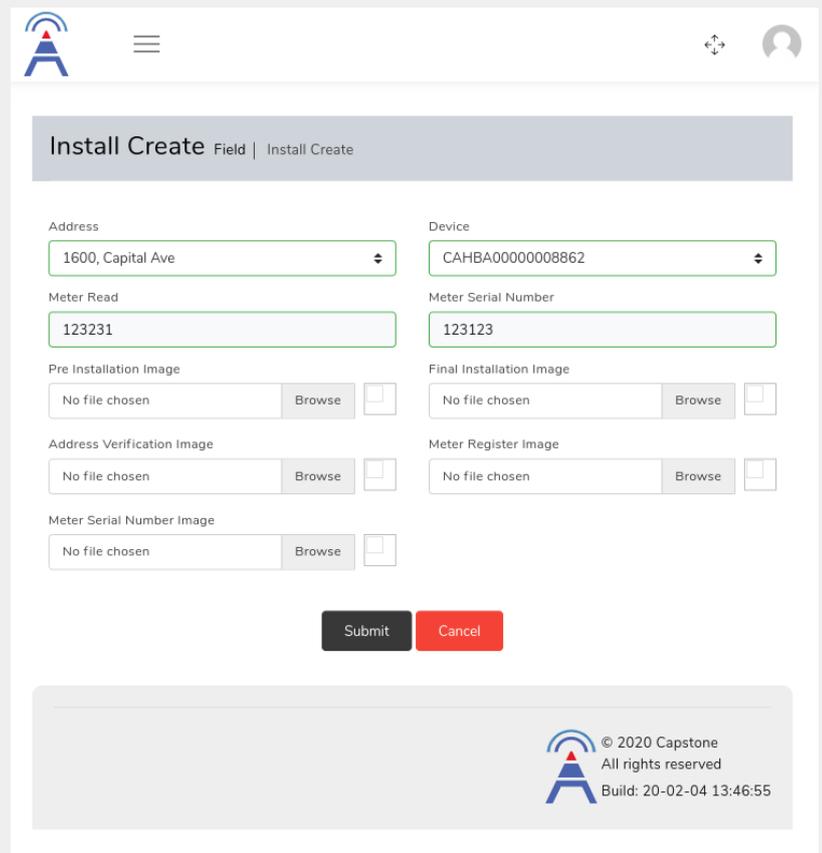
NOVA ENDPOINT

OPERATIONAL DETAILS

The Nova endpoint uses the NICOR AMI connector that can be connected to standard encoder water meters and/or pulse meters. If need be, the Nova endpoint can be shipped with exposed wires to allow manual connection. The endpoint can be programmed remotely from IntelliH2O® WMA for different reading levels, alerts, over the air updates and GPS. The endpoint uses a lithium thionyl chloride battery for long-lasting results in harsh environments and is rated IP68 for full submersion into water. It is also encapsulated with potting to ensure the electronics are protected from the environment. Additionally, the endpoint housing is built with UV-resistant plastic casing to provide maximum protection in any environmental setting.

INSTALLATION STEPS

Nova is easy to set up using the web-based application on Android, iOS, or other mobile devices. Simply fill out the installation form with the address, scan the device information, plug Nova into the installed meter and wait for confirmation from the app. The installer can take pictures of the install which will be uploaded into that customer record to ensure the quality of service.



The screenshot shows a mobile web application interface for creating a new installation. The title bar reads "Install Create" with a sub-label "Field | Install Create". The form contains the following fields:

- Address:** A dropdown menu with "1600, Capital Ave" selected.
- Device:** A dropdown menu with "CAHBA0000008862" selected.
- Meter Read:** A text input field containing "123231".
- Meter Serial Number:** A text input field containing "123123".
- Pre Installation Image:** A file selection area with "No file chosen" and a "Browse" button.
- Final Installation Image:** A file selection area with "No file chosen" and a "Browse" button.
- Address Verification Image:** A file selection area with "No file chosen" and a "Browse" button.
- Meter Register Image:** A file selection area with "No file chosen" and a "Browse" button.
- Meter Serial Number Image:** A file selection area with "No file chosen" and a "Browse" button.

At the bottom of the form are two buttons: "Submit" (black) and "Cancel" (red). The footer of the application includes the Capstone logo, the text "© 2020 Capstone All rights reserved", and the build information "Build: 20-02-04 13:46:55".

NOVA ENDPOINT

TECHNICAL SPECS

Communication	Two-Way LTE-M or NB-IoT
Data Logging	Nova Stores 120 days of hourly meter read (Can be configured remotely from IntelliH ₂ O® WMA)
Transmit intervals	Transmit intervals can be adjusted between 1min to 1-month call-ins from IntelliH ₂ O® WMA (adjusting this could affect the warranty and life expectancy of the battery)
Theft Protection	The Nova includes GPS and a tilt sensor to alert change in orientation of the meter lid. Nova will send an alert if communication with the meter has been tampered with
Cellular Network Providers	US: AT&T
Data Security	The Nova uses the latest encryption standards
Alerts	Supports extended protocol (Diehl) <ul style="list-style-type: none"> • Reverse Flow • No usage alarm • Leakage alarm • Low Temperature (Below 37 F) • Low Battery
Operating Temperature	-40C to 80C/-40F to 176F
Battery	Lithium thionyl chloride battery (20-year battery life expectancy)
Battery Health	The battery health can be monitor from IntelliH ₂ O® WMA
Firmware updates	Nova supports over the air updates
Connector	Nicor AMI connector